

YATES DRILLING COMPANY
PROPOSED CACTUS QUEEN UNIT
CHAVES COUNTY, NEW MEXICO
MAPS & CROSS SECTIONS

Statutory Unit Area

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

YATES EXHIBIT NO. 15

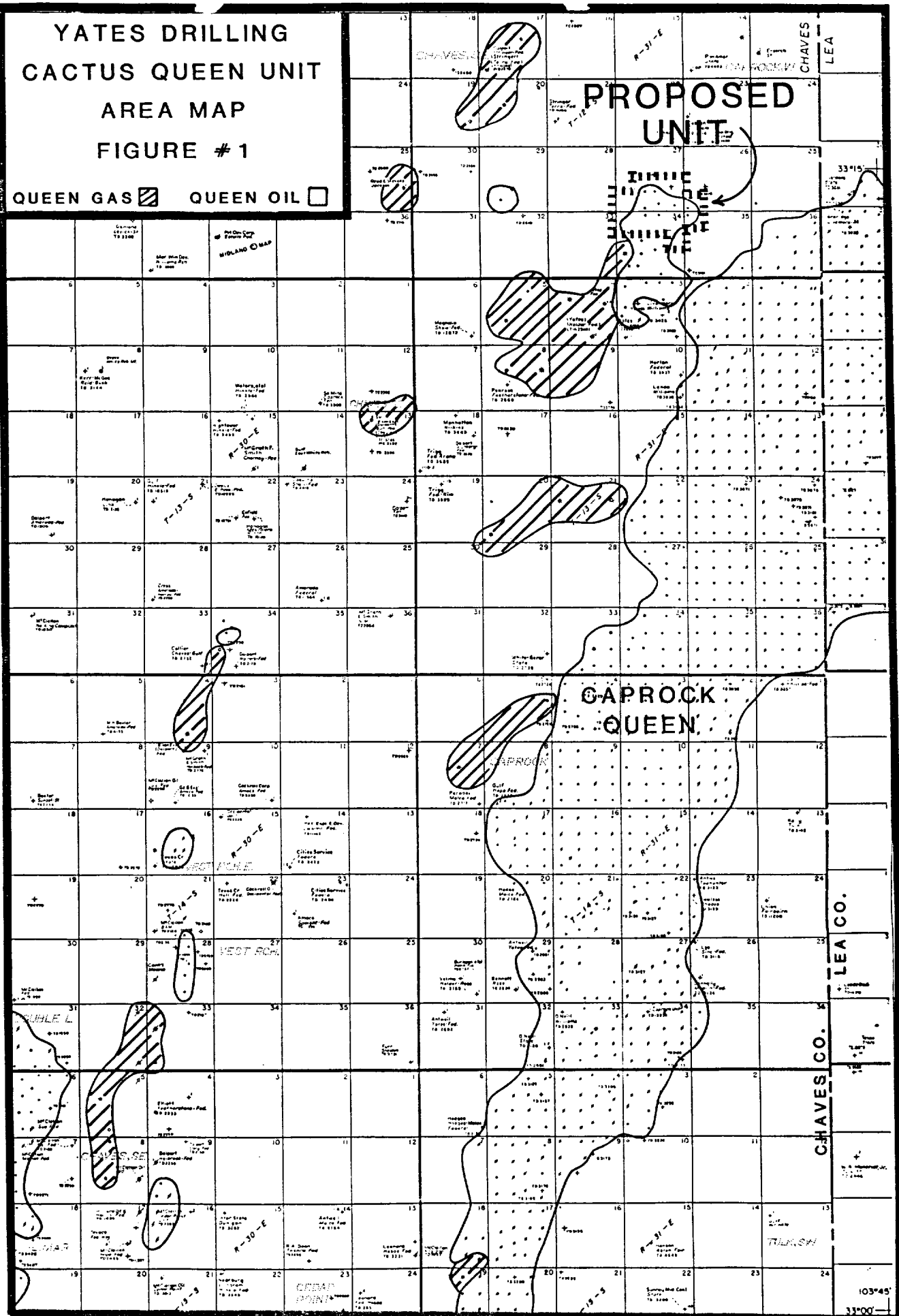
CASE NO. 9809, 9810, 9823

FIGURES

1. Area Map
2. Unit Tract Map
3. Area Queen Structure Map (pocket)
4. Queen Paleo Structure Map
5. Gross Sand Map
6. Net Pay Map
7. Oil Saturated Pore Volume Map
8. Permeability - Porosity Cross Plot
9. Net Capacity Map (Permeability - Feet)
10. Cross Section A-A' (pocket)
11. Cross Section B-B' (pocket)
12. Cumulative Primary Production Map
13. Pressure Map 11/84 - 3/85
14. Pressure Map 9/86 - 10/86
15. Pressure Map 1/89
16. Injection Pattern Map

YATES DRILLING
CACTUS QUEEN UNIT
AREA MAP
FIGURE #1

QUEEN GAS  QUEEN OIL 



28

27

UNIT OUTLINE

ENRON

LH-1648

(5a)

2

Apache St.

YDC

NM-015807

(1a)

9

Garner Fed.

YDC

3

(8)

Doyal

CACTUS QUEEN UNIT

YDC

NM-015807

7

(1)

1

Apache St.

Garner Fed.

YDC

2

(7)

Doyal

YDC

(9)

4

Doyal

33

(5b)

(5)

YDC

3

NM-0256521

(2)

Burklitt Fed.

(3)

3

YDC

NM-15896

DeLuna Fed.

YDC

1

(6)

Doyal

YDC

(4)

1

B-10418

Gallagher St.

(2a)

YDC

NM-015807

(1b)

Garner Fed.

34

YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

T12S-R31E

CHAVES CO. NM

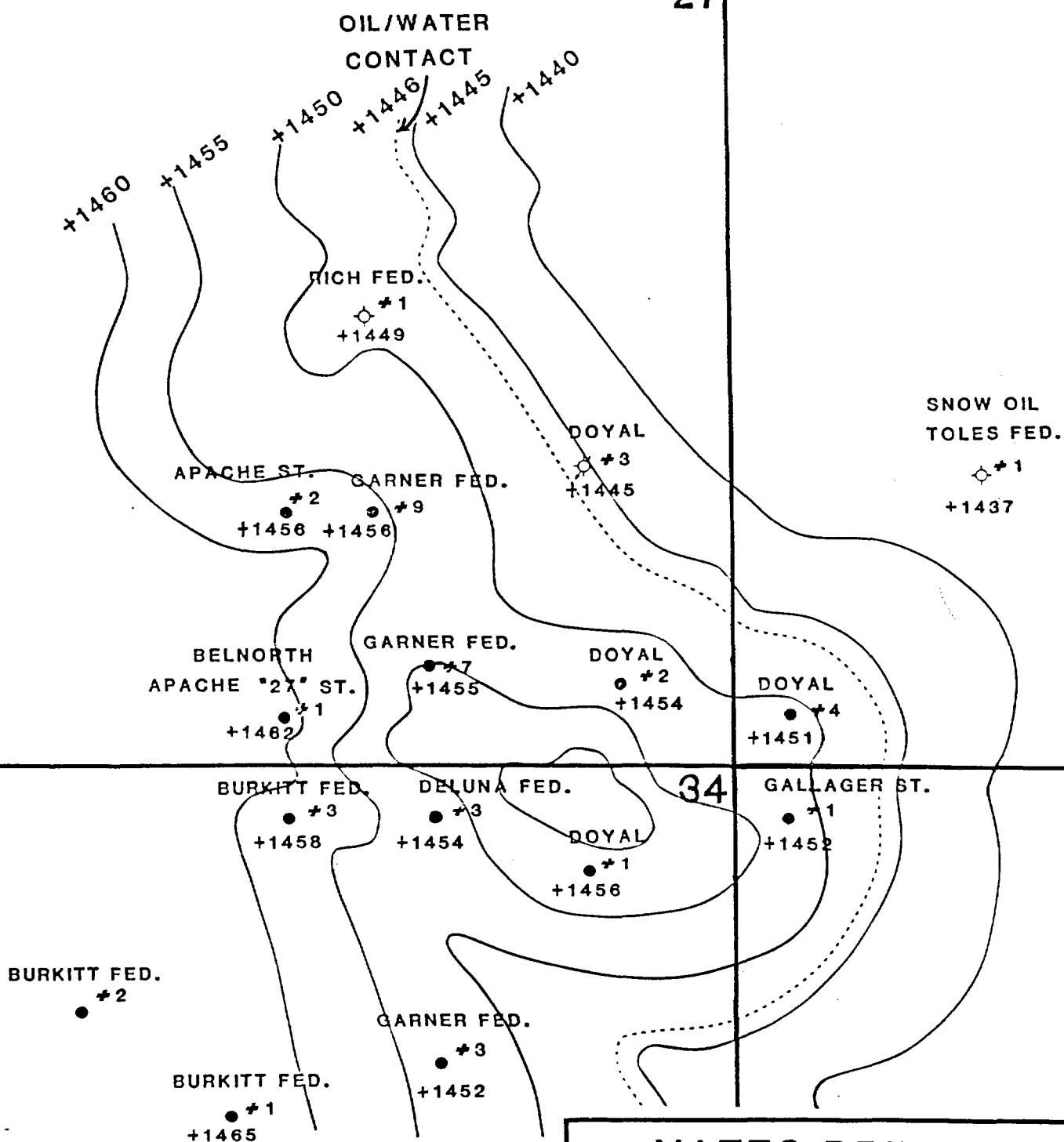
FIGURE #2

28

27

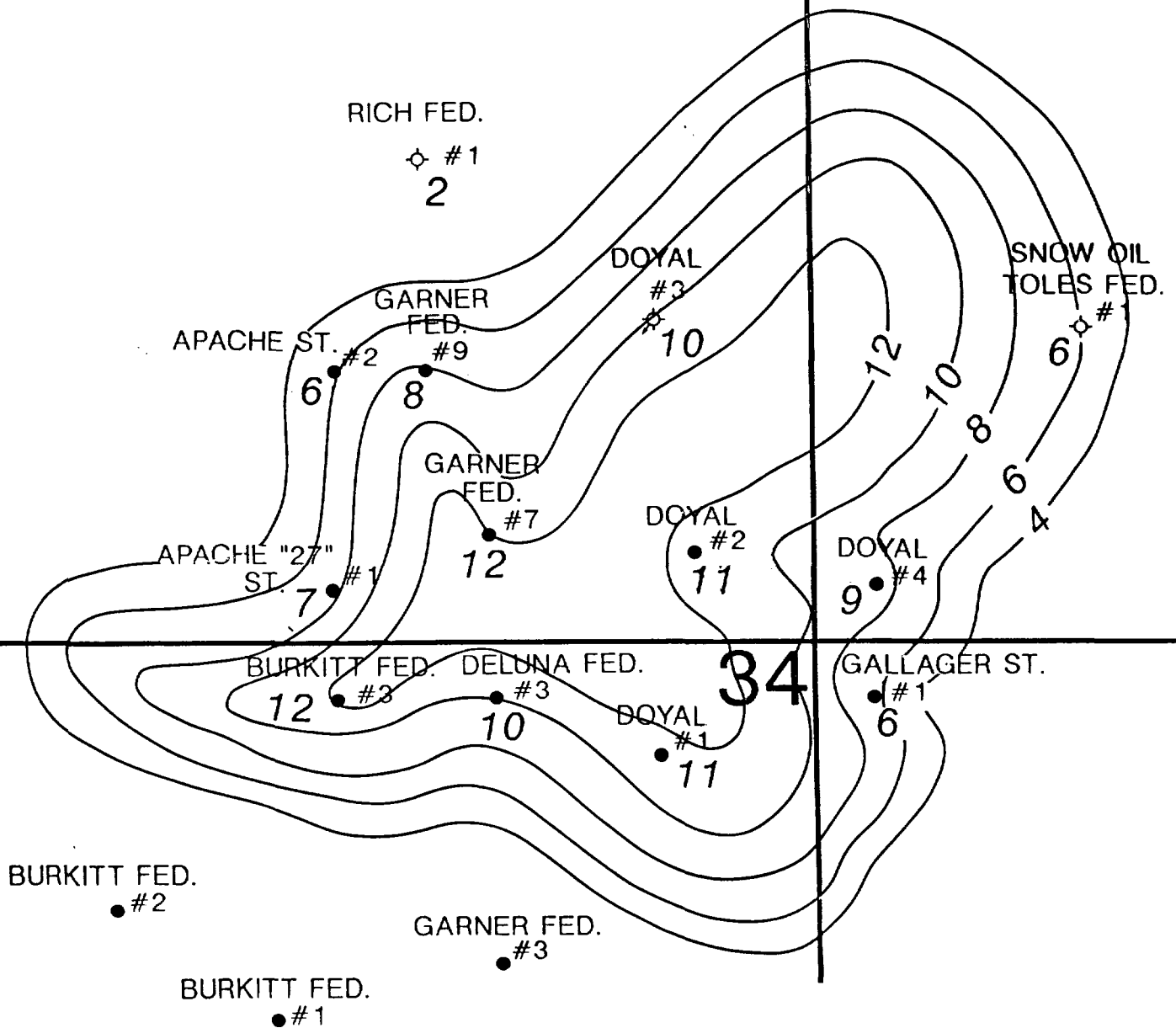
33

34



YATES DRILLING
 SE CHAVES QUEEN FIELD
 CACTUS QUEEN UNIT
 T12S-R31E
 CHAVES CO., NM
 QUEEN PALEO STRUCTURE
 INDICATED BY TILTED OIL/WATER CONTACT
 C.I.:5'
 FIGURE #4

27



YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

CHAVES CO., NM

T12S-R31E

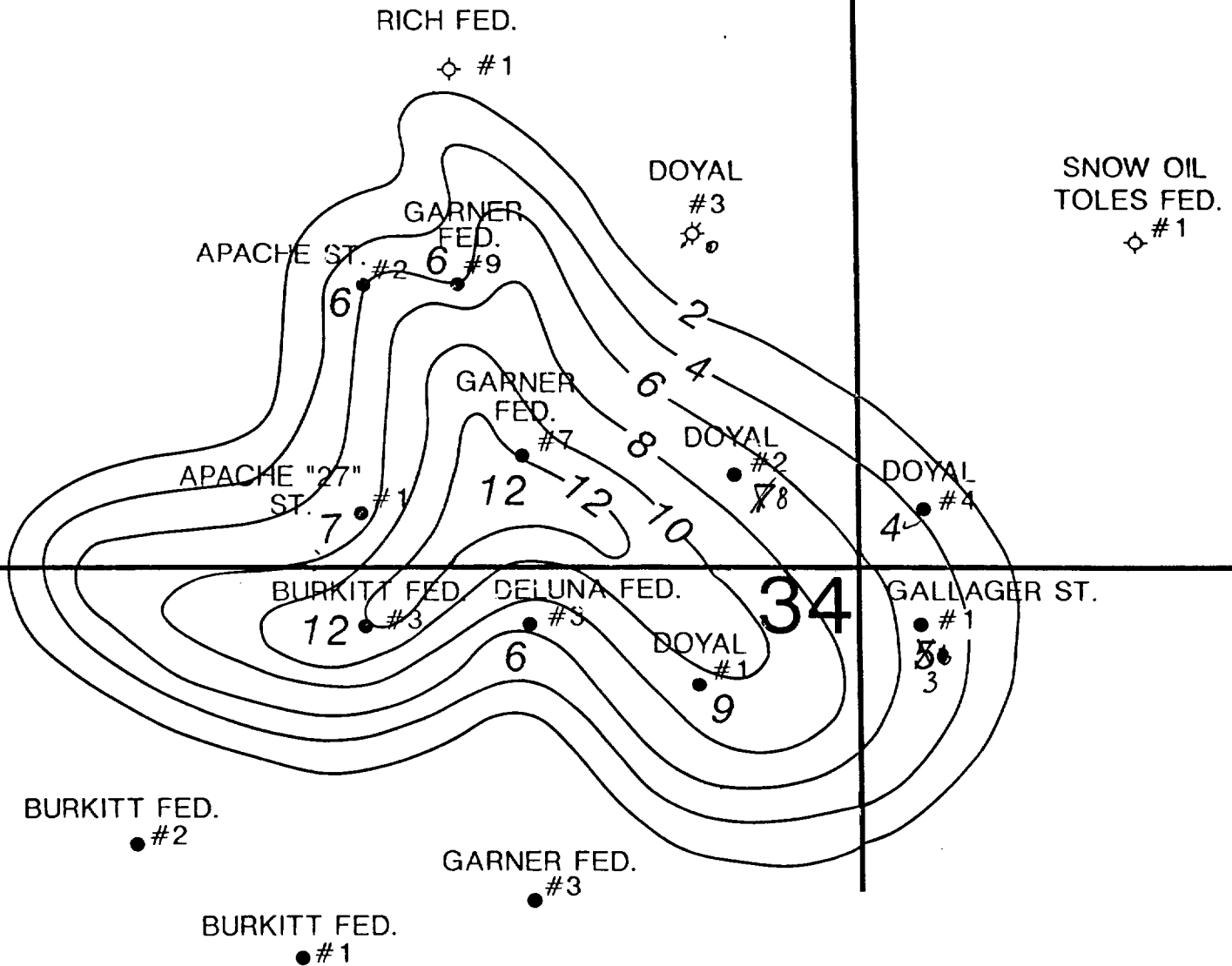
GROSS SAND MAP

FT $\geq$ 10% $\emptyset$

C.I. = 2'

FIGURE #5

27



YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

CHAVES CO., NM

T12S-R31E

NET PAY

C.I. = 2'

FIGURE #6

27

OIL/WATER CONTACT

RICH FED.

◇ #1

DOYAL

#3

◇ 0

SNOW OIL
TOLES FED.

◇ #1

GARNER
FED.

0.25

0.50

0.75

1.00

1.25

1.50

1.75

2.00

2.25

2.50

2.75

3.00

3.25

3.50

3.75

4.00

4.25

4.50

4.75

5.00

5.25

5.50

5.75

6.00

6.25

6.50

6.75

7.00

7.25

7.50

7.75

8.00

8.25

8.50

8.75

9.00

9.25

9.50

9.75

10.00

10.25

10.50

10.75

11.00

11.25

11.50

11.75

12.00

12.25

12.50

12.75

13.00

13.25

13.50

13.75

14.00

14.25

14.50

14.75

15.00

15.25

15.50

15.75

16.00

16.25

16.50

16.75

17.00

17.25

17.50

17.75

18.00

18.25

18.50

18.75

19.00

19.25

19.50

19.75

20.00

20.25

20.50

20.75

21.00

21.25

21.50

21.75

22.00

22.25

22.50

22.75

23.00

23.25

23.50

23.75

24.00

24.25

24.50

24.75

25.00

25.25

25.50

25.75

26.00

26.25

26.50

26.75

27.00

27.25

27.50

27.75

28.00

28.25

28.50

28.75

29.00

29.25

29.50

29.75

30.00

30.25

30.50

30.75

31.00

31.25

31.50

31.75

32.00

32.25

32.50

32.75

33.00

33.25

33.50

33.75

34.00

34.25

34.50

34.75

35.00

35.25

35.50

35.75

36.00

36.25

36.50

36.75

37.00

37.25

37.50

37.75

38.00

38.25

38.50

38.75

39.00

39.25

39.50

39.75

40.00

40.25

40.50

40.75

41.00

41.25

41.50

41.75

42.00

42.25

42.50

42.75

43.00

43.25

43.50

43.75

44.00

44.25

44.50

44.75

45.00

45.25

45.50

45.75

46.00

46.25

46.50

46.75

47.00

47.25

47.50

47.75

48.00

48.25

48.50

48.75

49.00

49.25

49.50

49.75

50.00

50.25

50.50

50.75

51.00

51.25

51.50

51.75

52.00

52.25

52.50

52.75

53.00

53.25

53.50

53.75

54.00

54.25

54.50

54.75

55.00

55.25

55.50

55.75

56.00

56.25

56.50

56.75

57.00

57.25

57.50

57.75

58.00

58.25

58.50

58.75

59.00

59.25

59.50

59.75

60.00

60.25

60.50

60.75

61.00

61.25

61.50

61.75

62.00

62.25

62.50

62.75

63.00

63.25

63.50

63.75

64.00

64.25

64.50

64.75

65.00

65.25

65.50

65.75

66.00

66.25

66.50

66.75

67.00

67.25

67.50

67.75

68.00

68.25

68.50

68.75

69.00

69.25

69.50

69.75

70.00

70.25

70.50

70.75

71.00

71.25

71.50

71.75

72.00

72.25

72.50

72.75

73.00

73.25

73.50

73.75

74.00

74.25

74.50

74.75

75.00

75.25

75.50

75.75

76.00

76.25

76.50

76.75

77.00

77.25

77.50

77.75

78.00

78.25

78.50

78.75

79.00

79.25

79.50

79.75

80.00

80.25

80.50

80.75

81.00

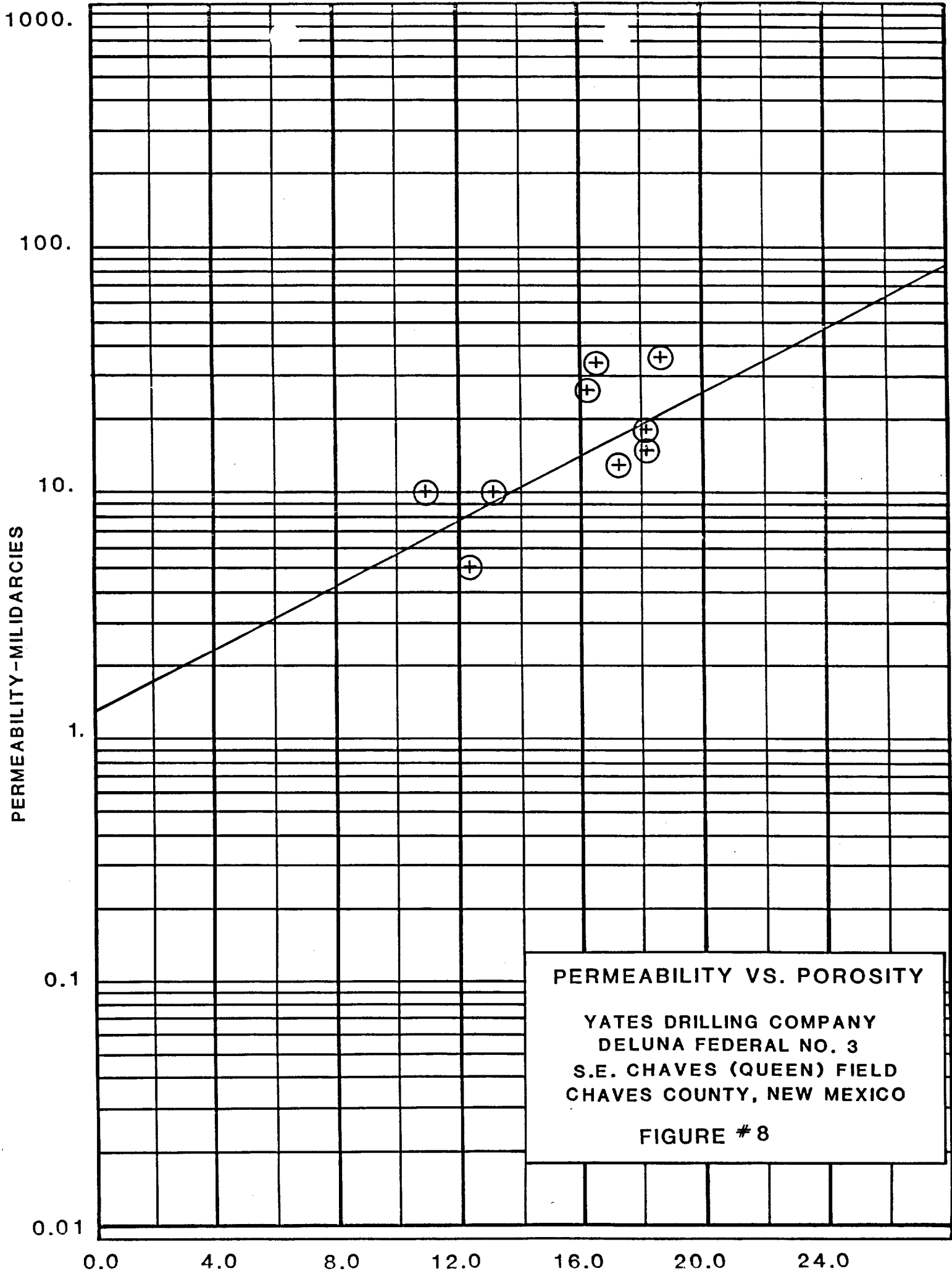
81.25

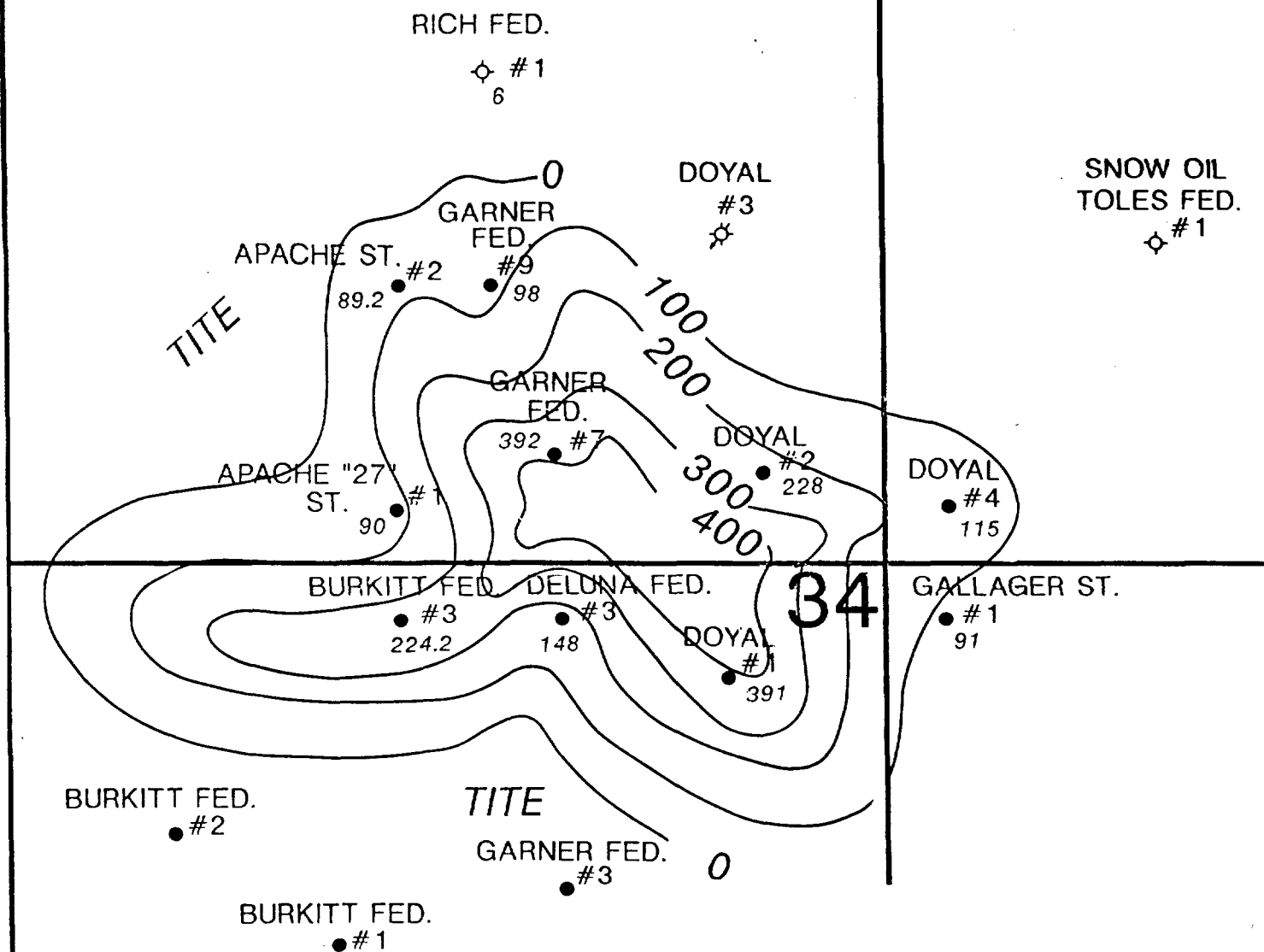
81.50

81.75

82.00

82.25





YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

CHAVES CO., NM

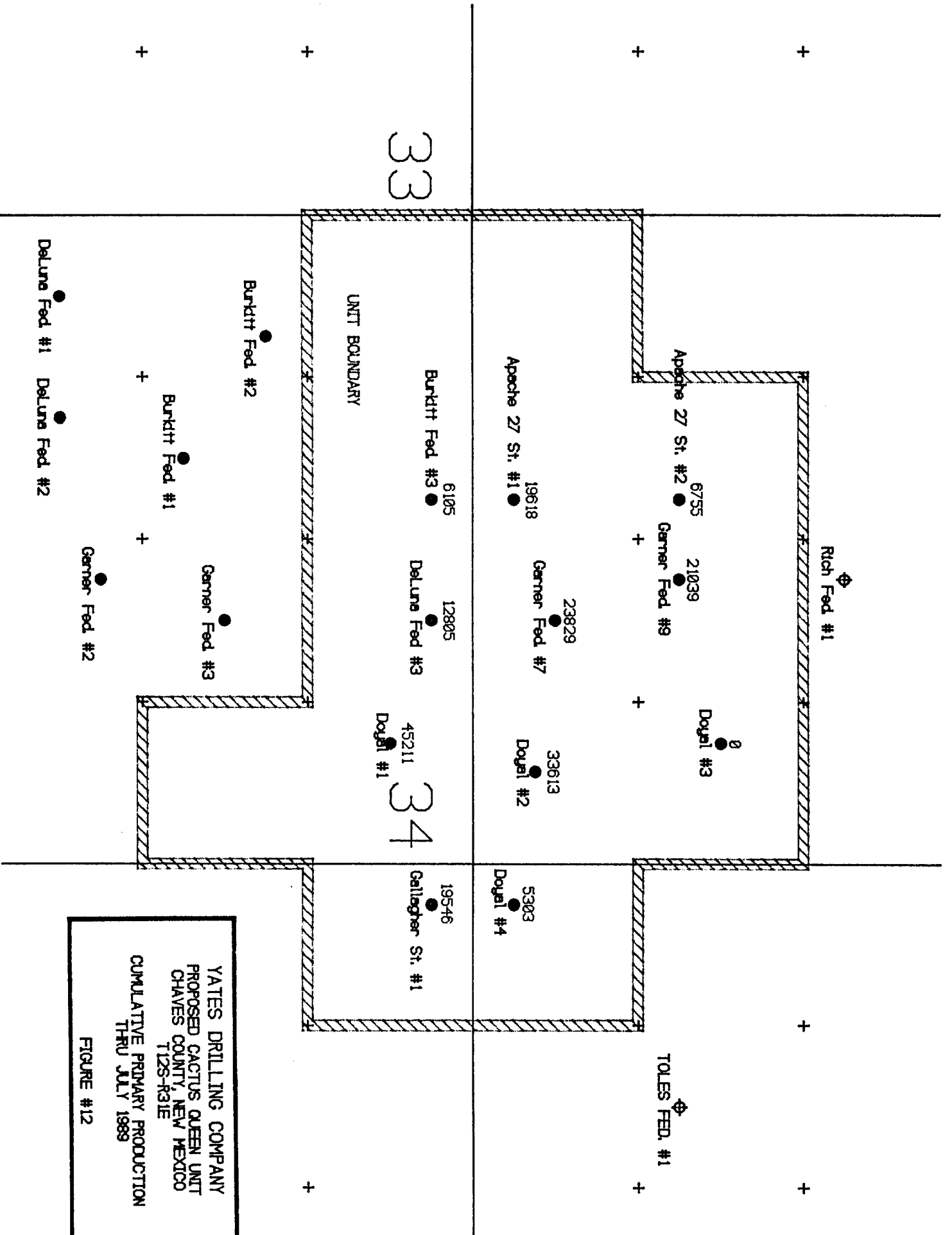
T12S-R31E

PERMEABILITY FEET

AVG K(md) x NET FT = K FT

C.I. = 100'

FIGURE #9



YATES DRILLING COMPANY
PROPOSED CACTUS QUEEN UNIT
CHAVES COUNTY, NEW MEXICO
T12S-R31E
CUMULATIVE PRIMARY PRODUCTION
THRU JULY 1989

FIGURE #12

RICH FED.

• #1

SNOW OIL
TOLES FED.

• #1

DOYAL

• #3

APACHE ST.

• #2

GARNER FED.

• #9

930

11/84

41 hr SI

BELNORTH

GARNER FED.

• #7

DOYAL

• #2

APACHE "27" ST.

• #1

DOYAL 831

• #4 12/84

14 hr SI

BURKITT FED.

• #3

DELUNA FED.

• #3

782

3/85

19 hr SI

DOYAL

• #1

34

GALLAGER ST.

• #1 873

11/84

14 hr SI

BURKITT FED.

• #2

GARNER FED.

327 • #3

BURKITT FED. 1/85

254 • #1

71 hr SI

1/85

18 hr SI

GARNER FED.

200 • #2

1/85

144 hr SI

YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

T12S-R31E

CHAVES CO., NM

BOTTOM HOLE PRESSURE AT MID-PERF
(PSIA)

NOV/84 - MARCH/85

FIGURE #13

RICH FED.

⊙ #1

SNOW OIL
TOLES FED.

⊙ #1

DOYAL

⊙ #3

APACHE ST.

● #2

GARNER FED.

● #9

BELNORTH
APACHE "27" ST.

● #1

GARNER FED.

● #7

DOYAL

● #2

DOYAL
● #4

33

BURKITT FED.

101.2 ● #3
9/86
170 hr SI

DELUNA FED.

● #3
148.2
9/86
171 hr SI

34

GALLAGER ST.

● #1

DOYAL

● #1
118.2
9/86
170 hr SI

BURKITT FED.

298.2 ● #2
9/86
194 hr SI

GARNER FED.

BURKITT FED.
● #1

● #3
172.2
9/86
192 hr SI

360.2 DELUNA FED. 289.2
10/86 * #1 9/86
96 hr SI ● #2 96 hr SI

YATES DRILLING

SE CHAVES QUEEN FIELD

CACTUS QUEEN UNIT

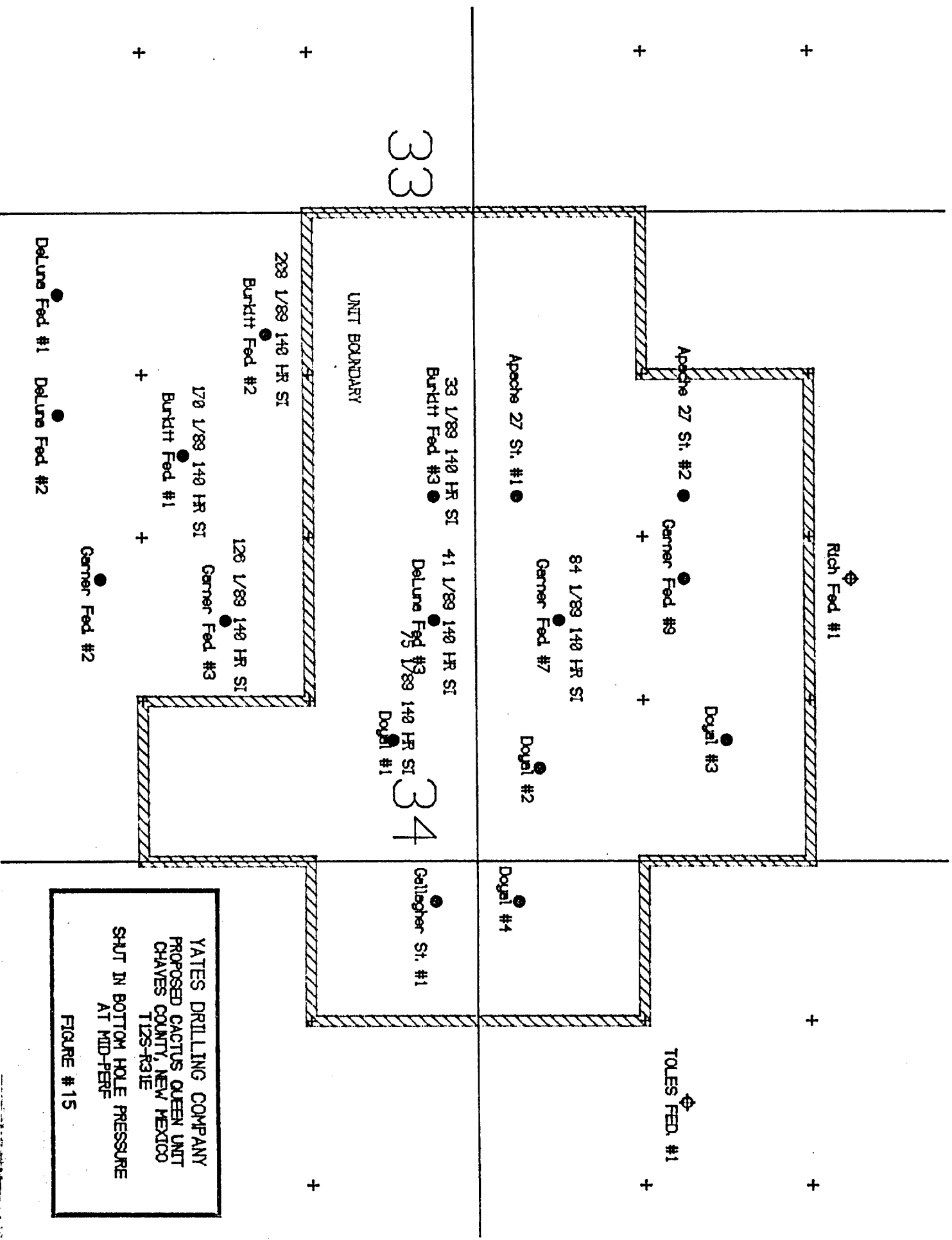
T12S-R31E

CHAVES CO., NM

BOTTOM HOLE PRESSURE AT MID-PERF
(PSIA)

SEPT/OCT 1986

FIGURE # 14



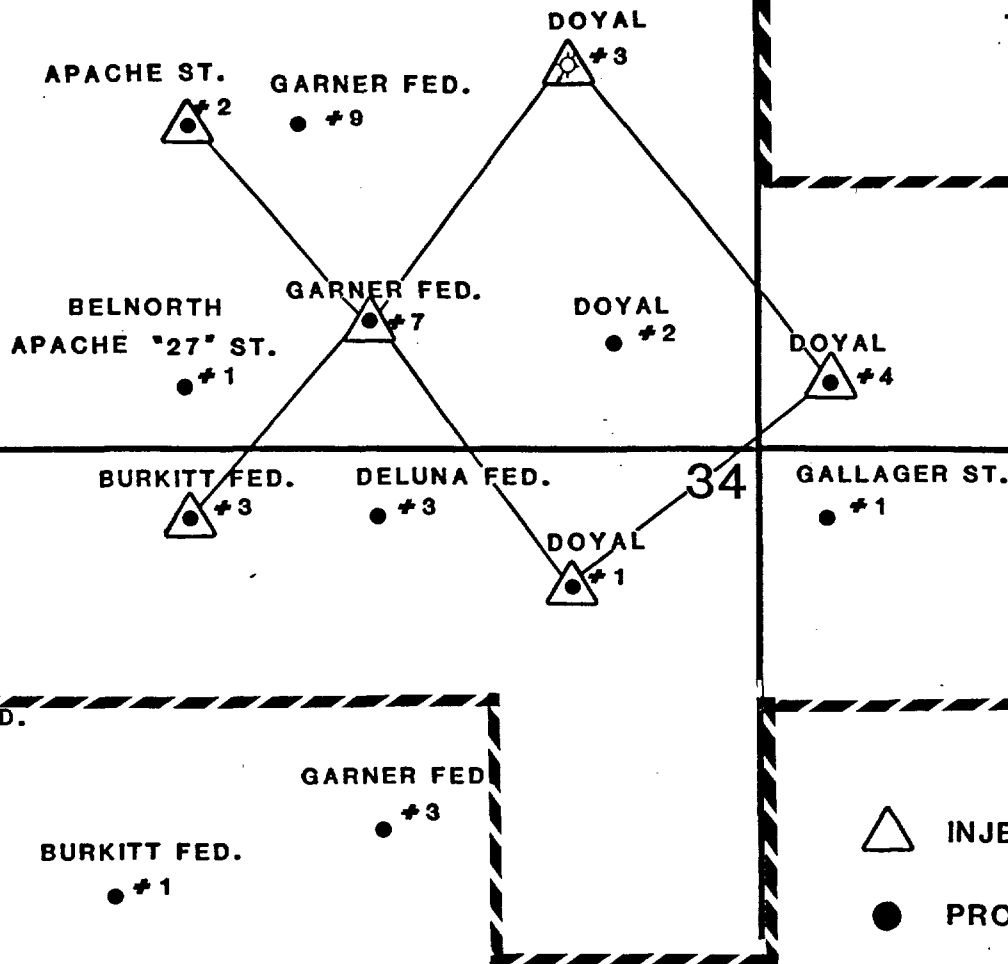
YATES DRILLING COMPANY
 PROPOSED CACTUS QUEEN UNIT
 CHAVES COUNTY, NEW MEXICO
 T12S-R31E

SHUT IN BOTTOM HOLE PRESSURE
 AT MID-PERF

FIGURE #15

27

RICH FED.

SNOW OIL
TOLES FED.

YATES DRILLING
SE CHAVES QUEEN FIELD
CACTUS QUEEN UNIT
T12S-R31E
CHAVES CO., NM
FIGURE # 16